**ELEC374 Machine Problem 2**

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# Part 1

## Discussion

## Analysis

Question 1:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Tile Width | Thread Number | Shared Memory Used Per Block | Max Shared Memory Per Device | Num Blocks Possible | Num SMPs | Total Number Threads On Device |
| 2 | 4 | 32 | 102400 | 3200 | 38 | 486400 |
| 5 | 25 | 200 | 102400 | 512 | 38 | 486400 |
| 10 | 100 | 800 | 102400 | 128 | 38 | 486400 |
| 25 | 625 | 5000 | 102400 | 20.48 | 38 | 486400 |
|  |  |  |  |  |  |  |

mp count: 38

name: NVIDIA GeForce RTX 3060 Ti

blocks per smp: 16

threads per block: 1024

shared mem per MP: 102400

max threads dimension 0: 1024

max threads dimension 1: 1024

max threads dimension 2: 64

max grid size dimension 0: 2147483647

max grid size dimension 1: 65535

max grid size dimension 2: 65535

regs per block: 65536

shared mem per block: 49152

num threads = num blocks \* num threads per bloc